

Supplementary Material (ESI) for RSC Advances.

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Supplementary information

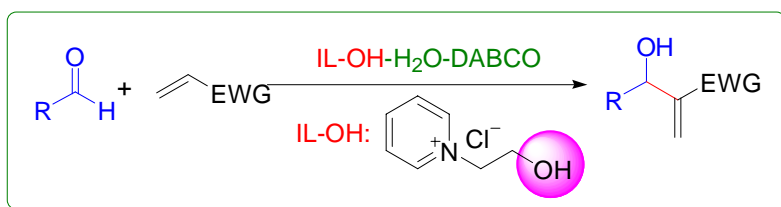
[HyEtPy]Cl-H₂O: An efficient and versatile solvent system for the DABCO-catalyzed Morita-Baylis-Hillman reaction

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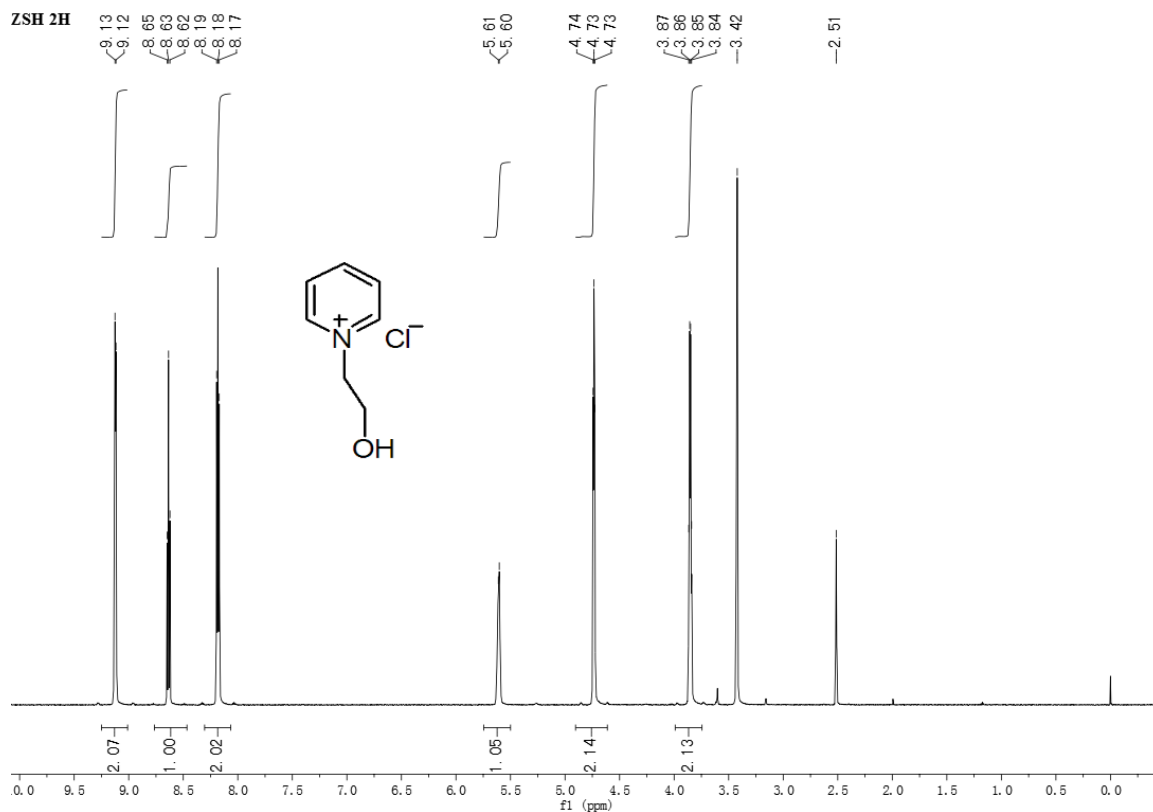
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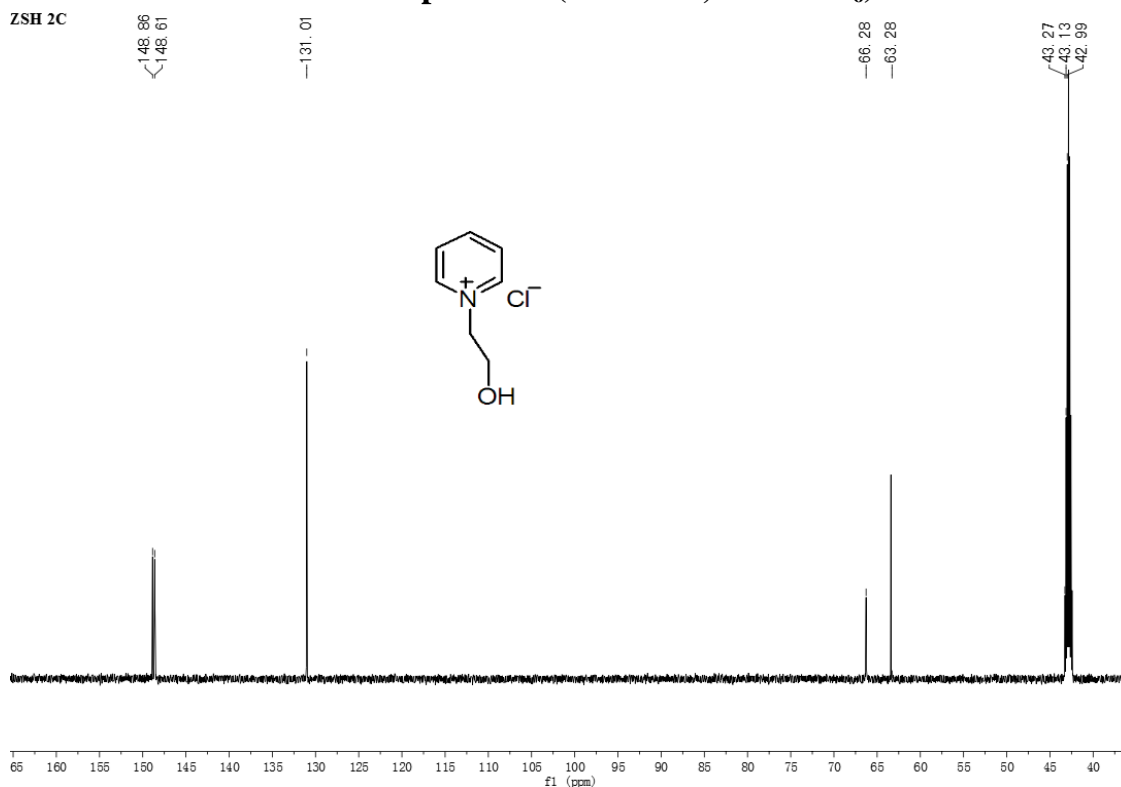


The NMR spectra for the ionic salts and M-B-H products

1. Ionic salt [HyEtPy]Cl

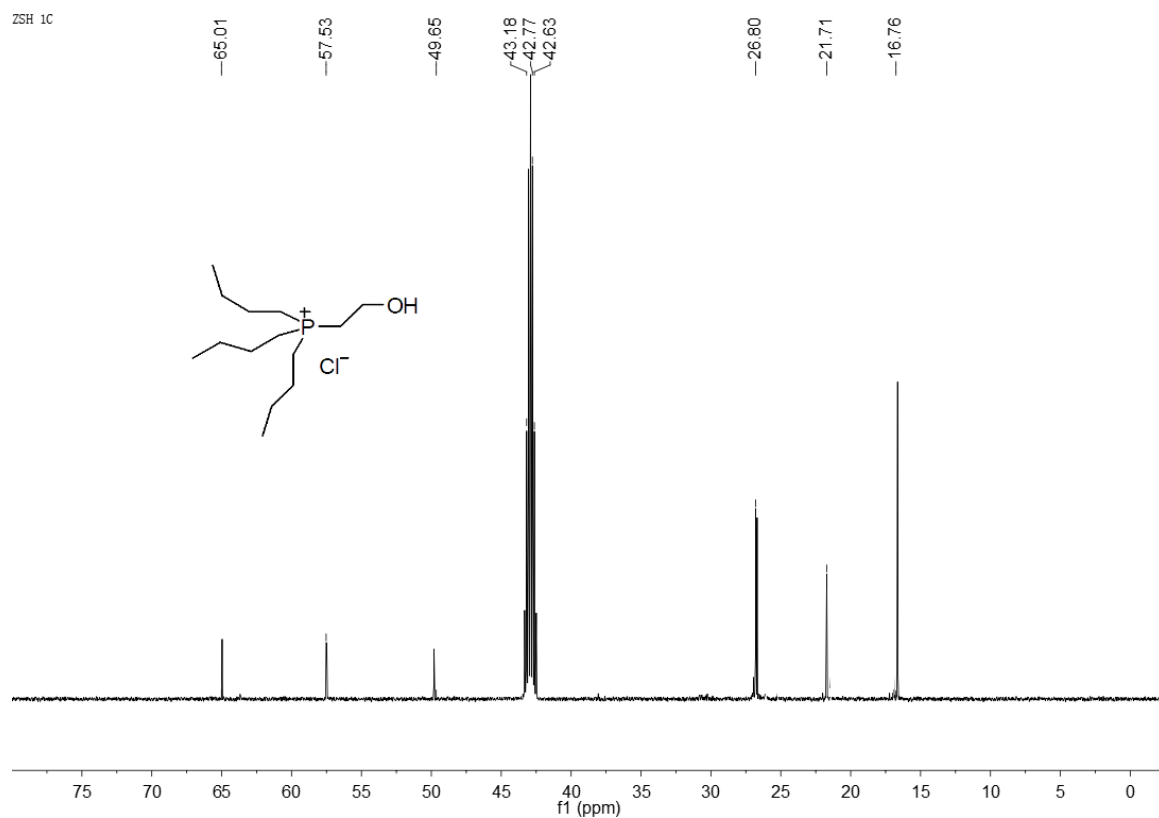
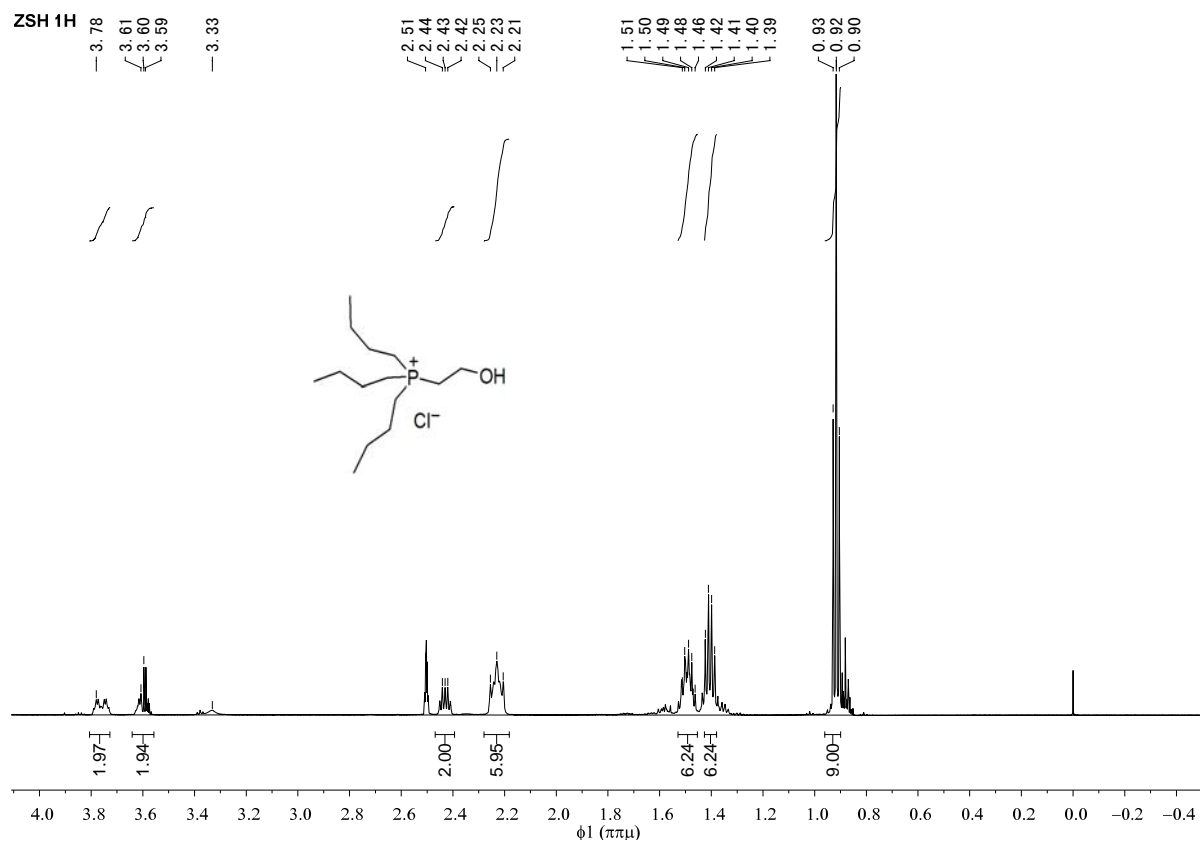


¹H-NMR spectrum (600 MHz, DMSO-*d*₆)



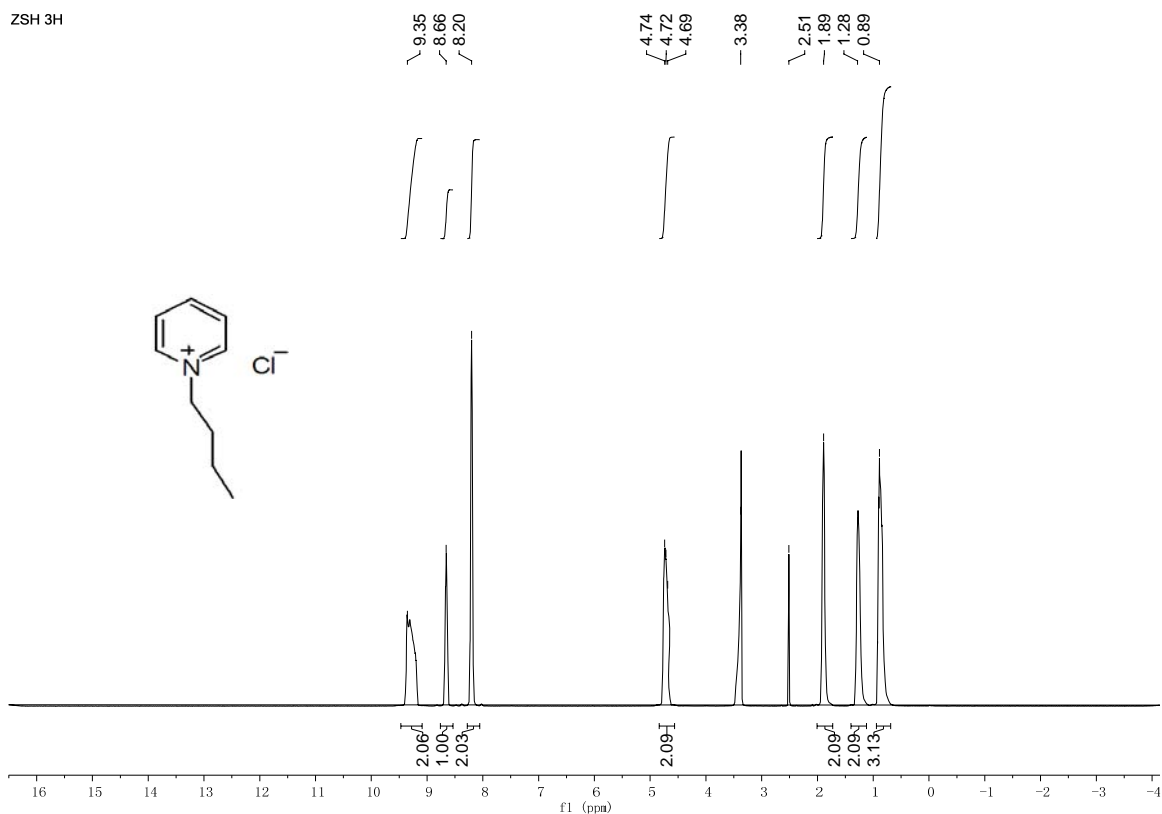
¹³C-NMR spectrum (151 MHz, DMSO-*d*₆)

2. Ionic salt $[n\text{-Bu}_3\text{P}^+\text{CH}_2\text{CH}_2\text{OH}]\text{Cl}^-$



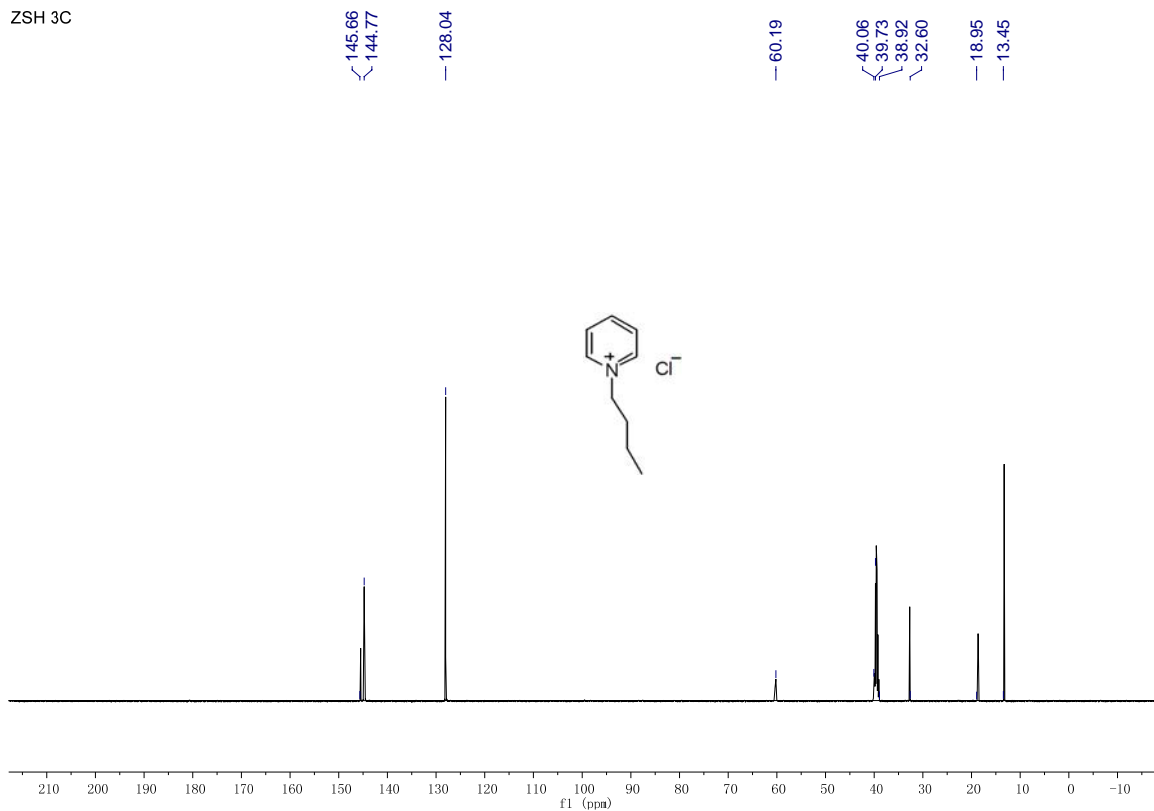
3. Ionic salt [BuPy]Cl

ZSH 3H



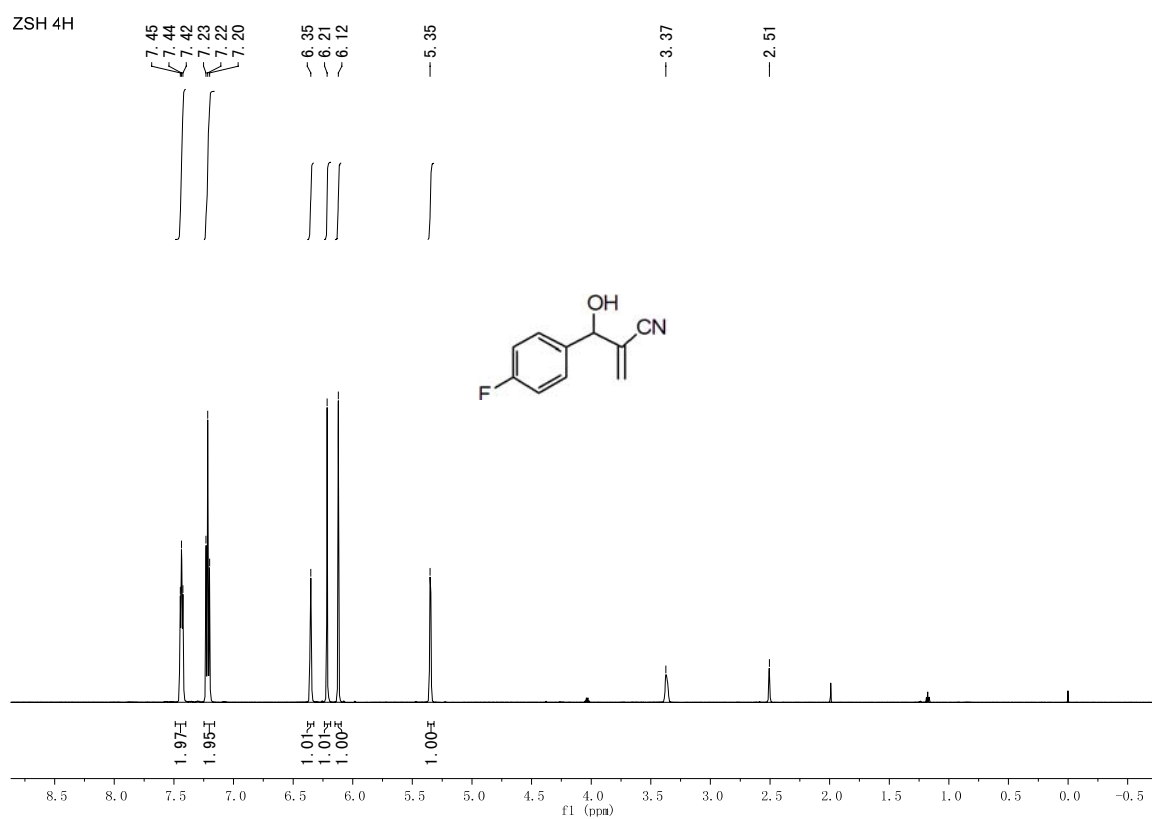
¹H-NMR spectrum (500 MHz, DMSO-*d*₆)

ZSH 3C

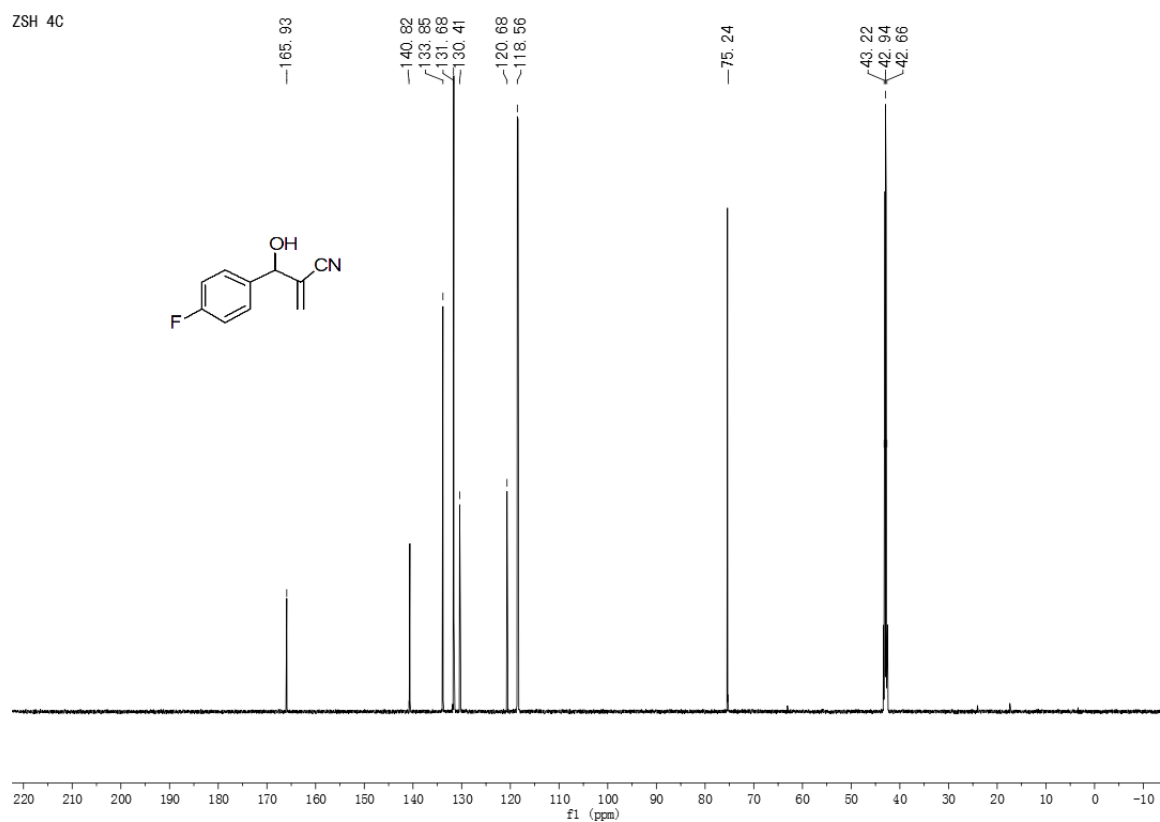


¹³C-NMR spectrum (126 MHz, DMSO-*d*₆)

4. 2-[(4-Fluoro-phenyl)-hydroxy-methyl]-acrylonitrile (Table 2, entry 3)

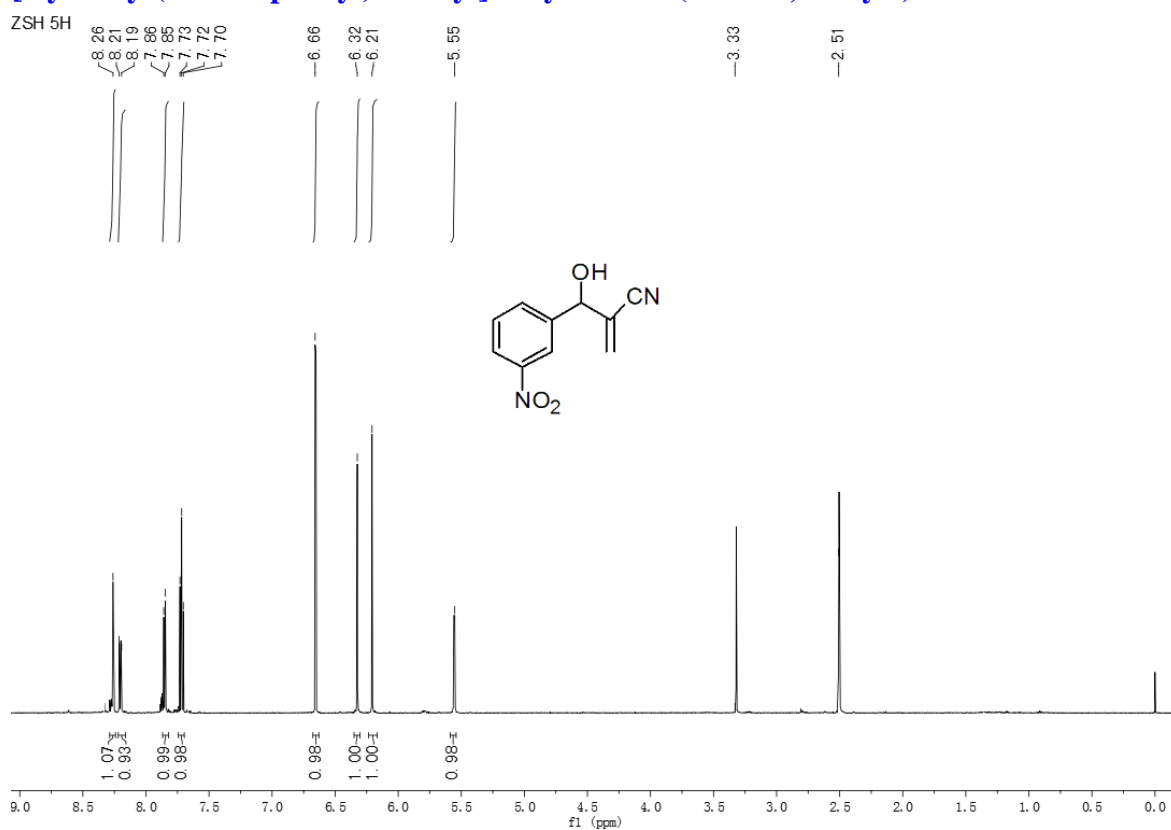


¹H-NMR spectrum (600 MHz, DMSO-*d*₆)

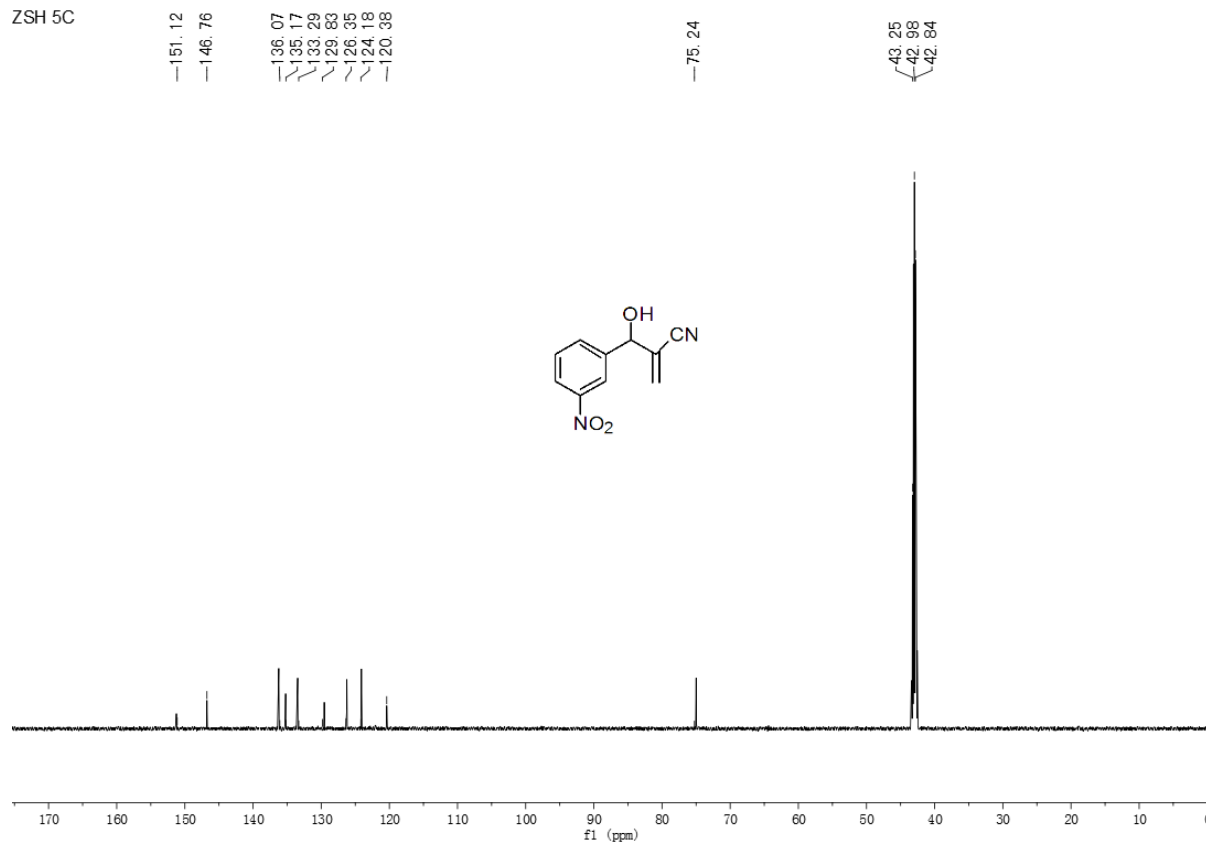


¹³C-NMR spectrum (151 MHz, DMSO-*d*₆)

5. 2-[Hydroxy-(3-nitro-phenyl)-methyl]-acrylonitrile (Table 2, entry 5)

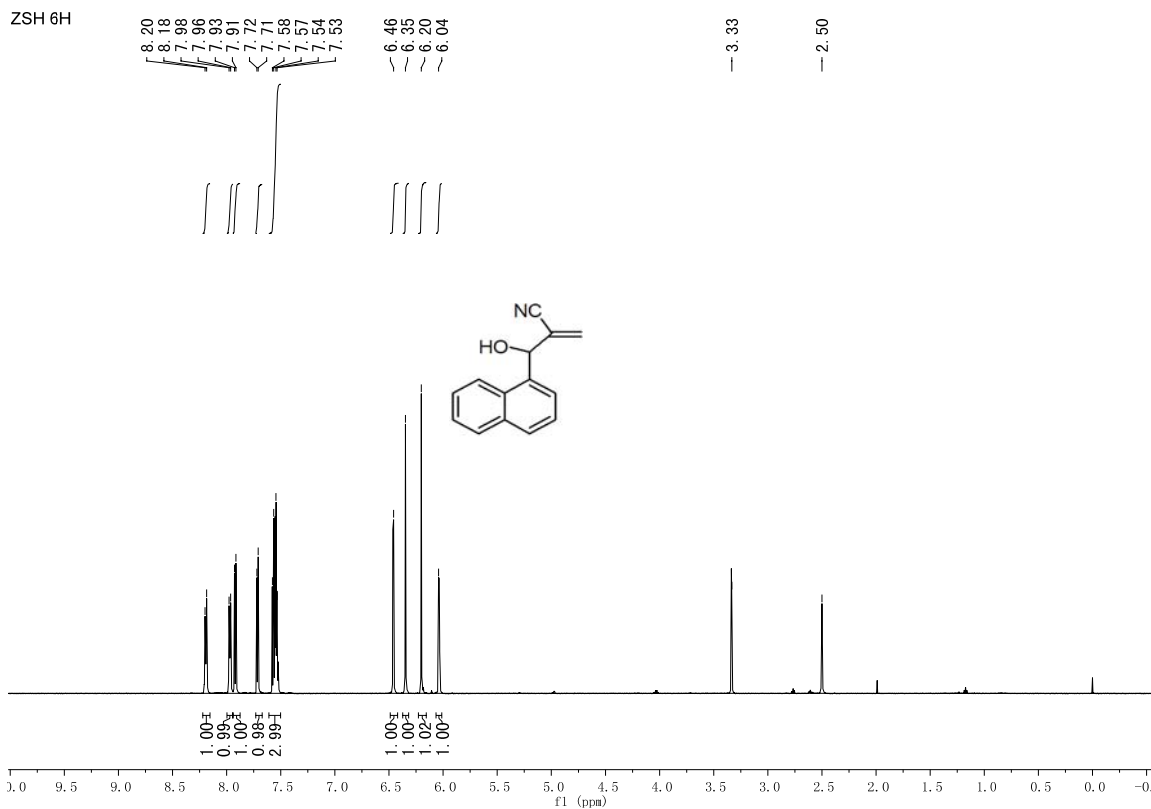


¹H-NMR spectrum (600 MHz, DMSO-*d*₆)

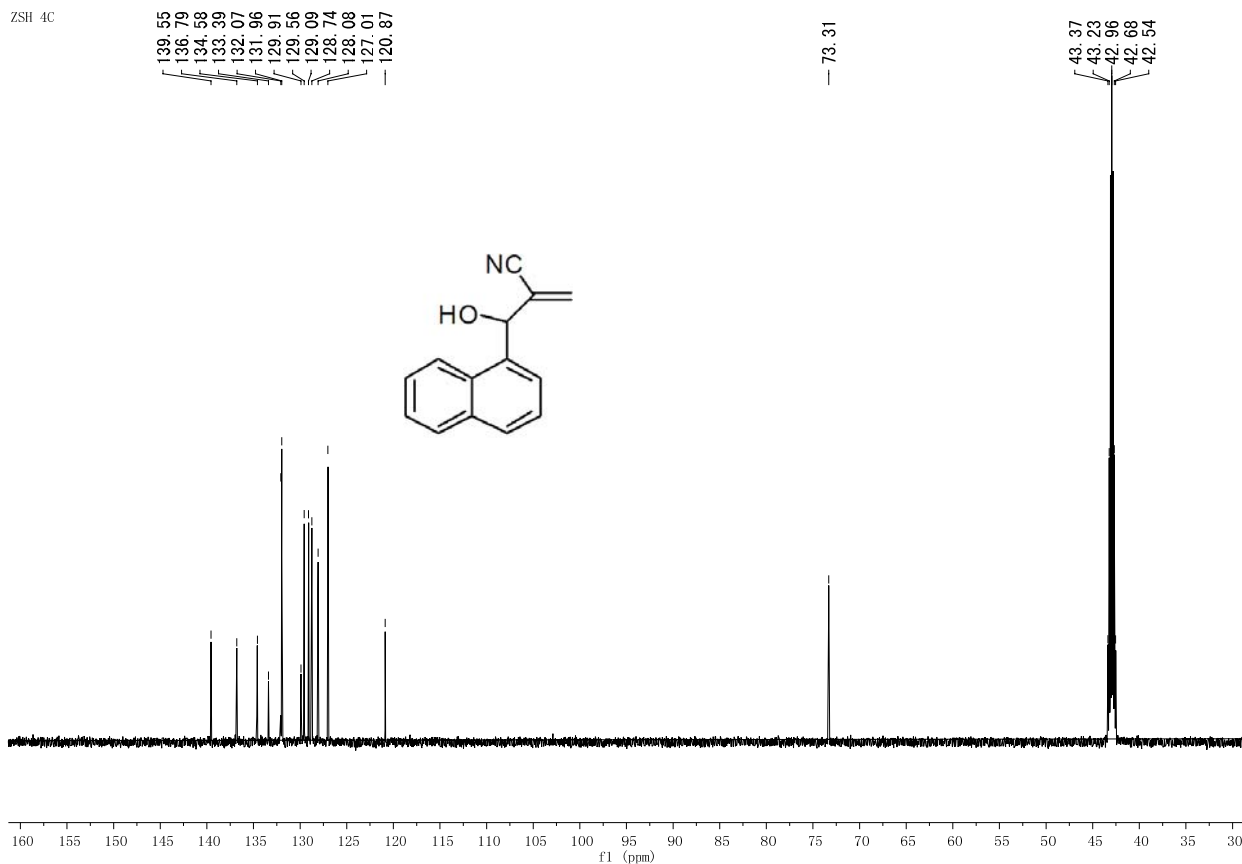


¹³C-NMR spectrum (151 MHz, DMSO-*d*₆)

6. 2-(Hydroxy-naphthalen-1-yl-methyl)-acrylonitrile (Table 2, entry 12)



¹H-NMR spectrum (600 MHz, DMSO-*d*₆)



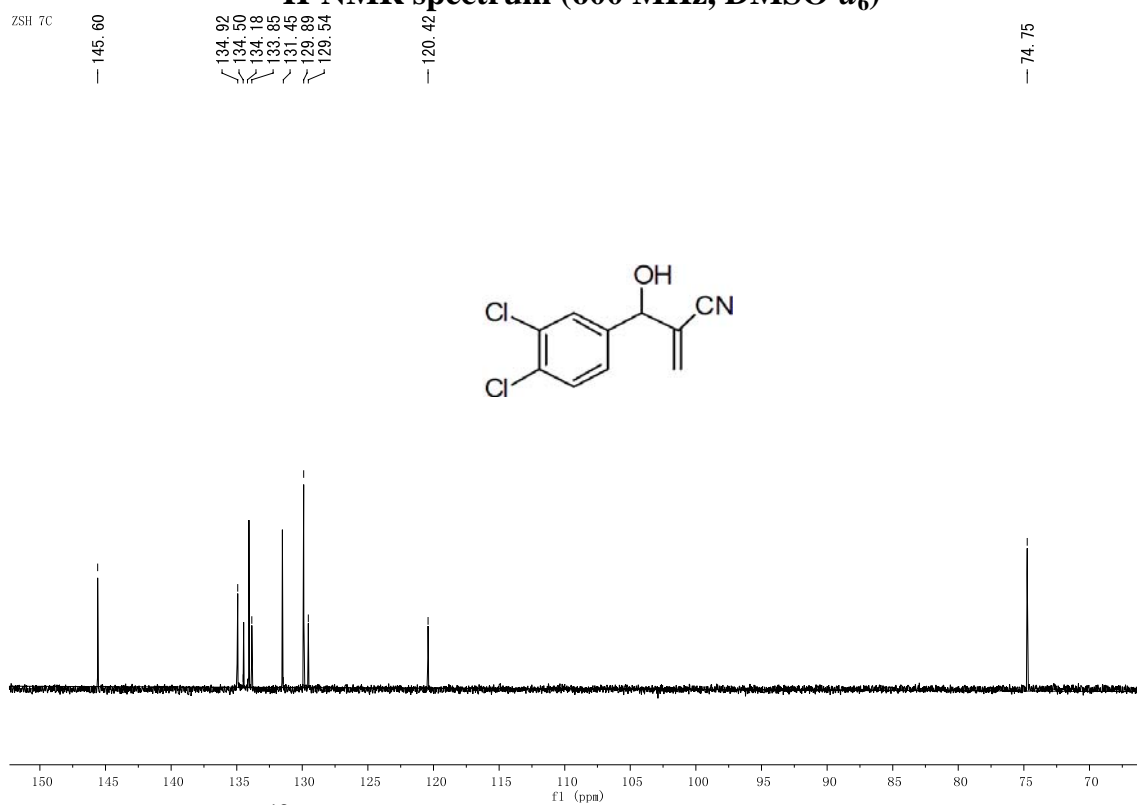
¹³C-NMR spectrum (151 MHz, DMSO-*d*₆)

7. 2-[(3,4-Dichloro-phenyl)-hydroxy-methyl]-acrylonitrile (Table 2, entry 6)

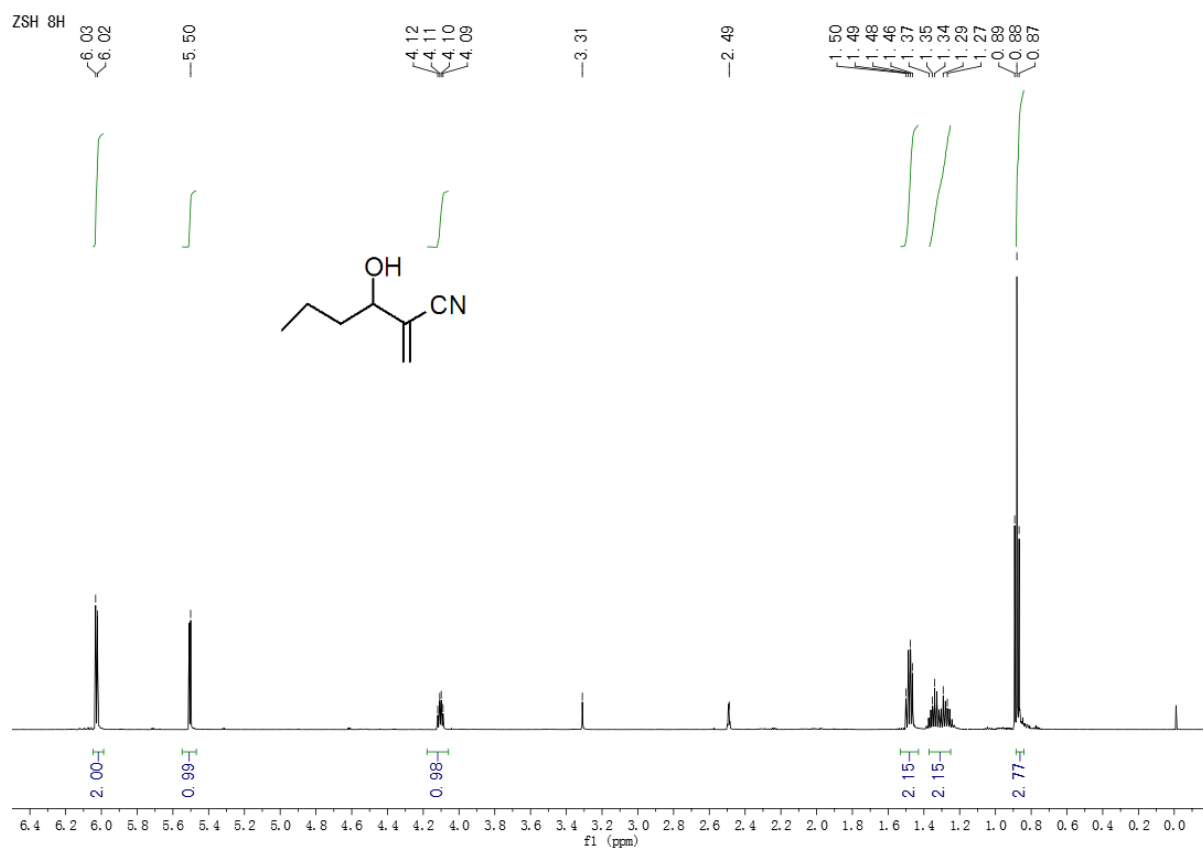
ZSH 7H



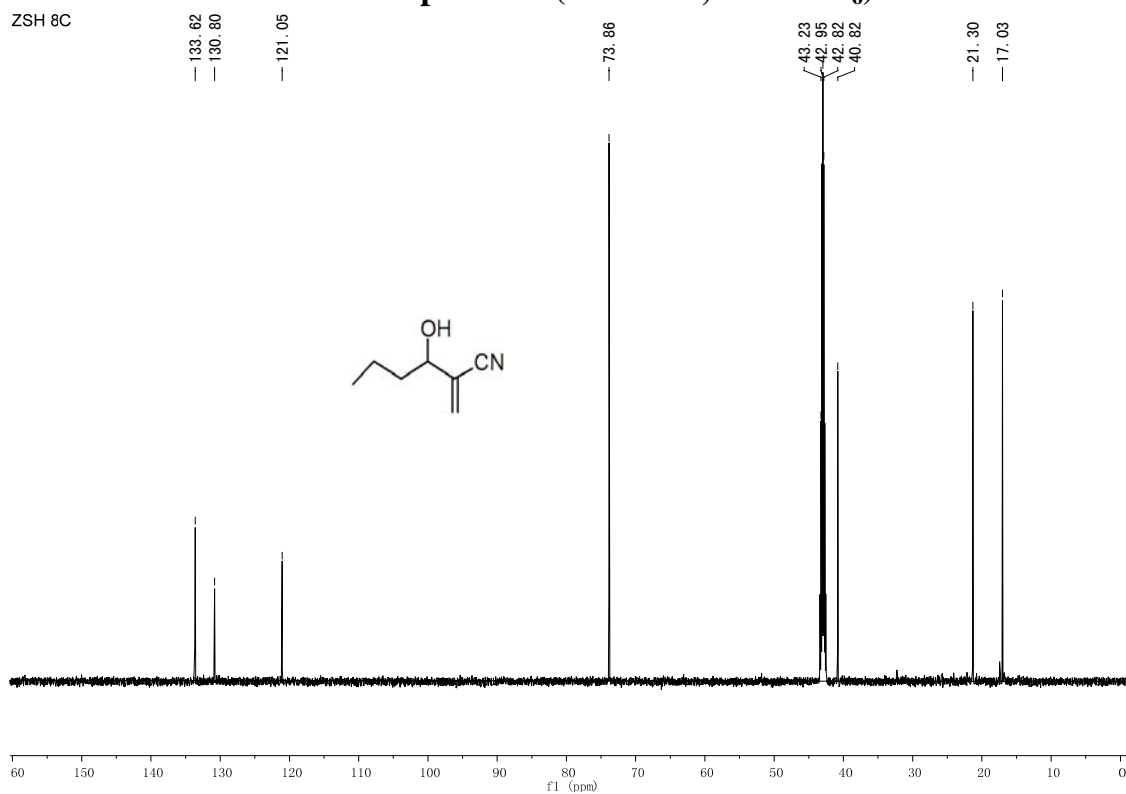
ZSH 7C



8. 3-Hydroxy-2-methylene-hexanenitrile (Table 2, entry 16)

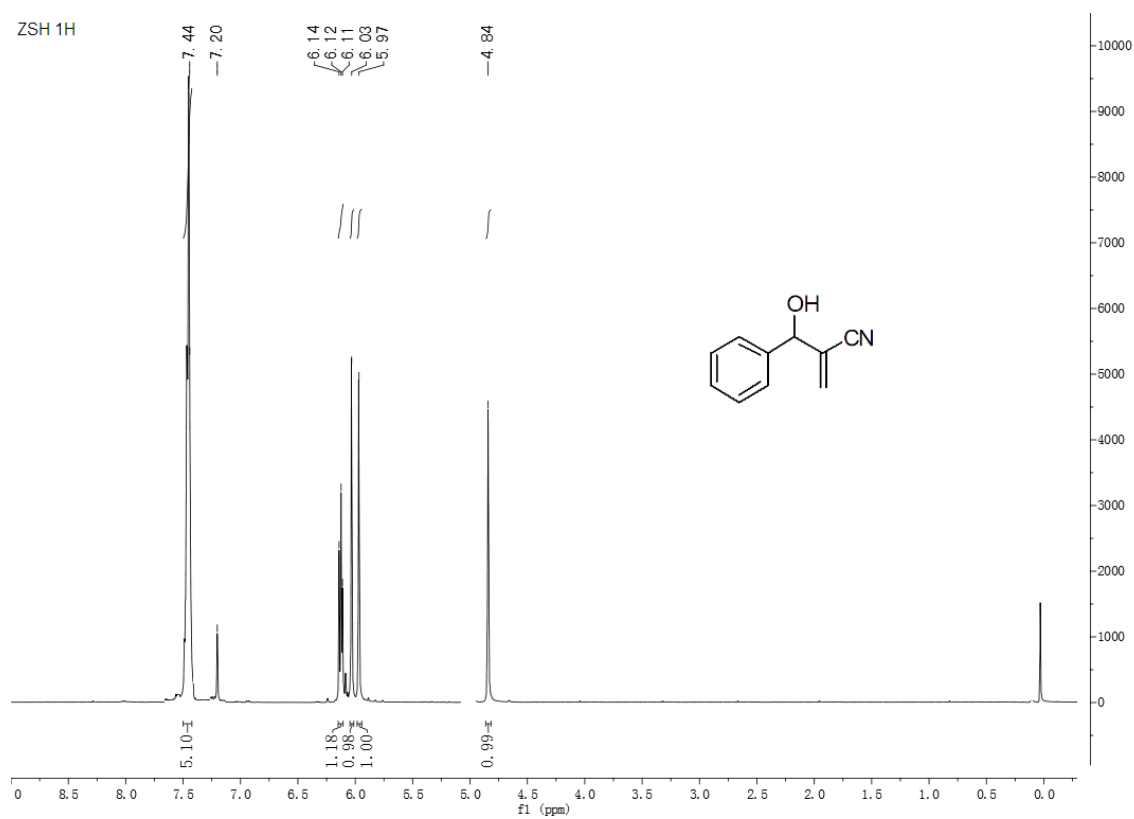


¹H-NMR spectrum (600 MHz, DMSO-*d*₆)

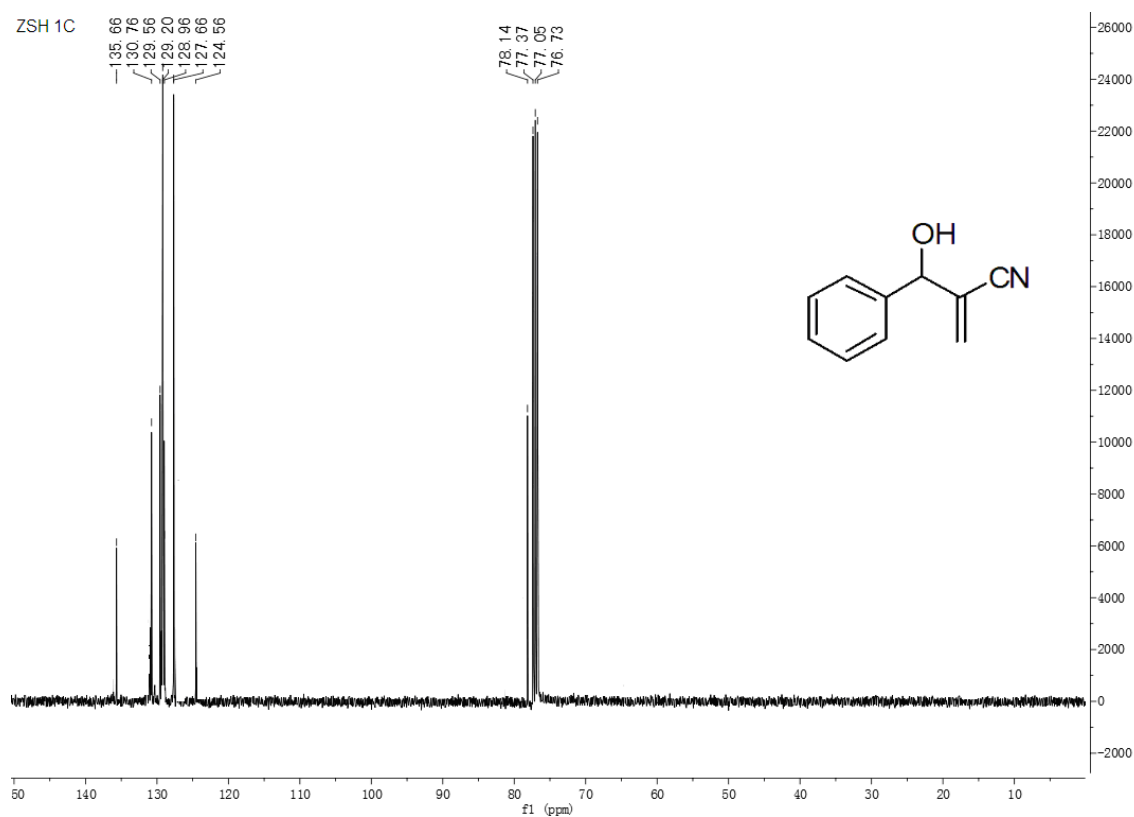


¹³C-NMR spectrum (151 MHz, DMSO-*d*₆)

9. 2-(Hydroxy-phenyl-methyl)-acrylonitrile (Table 2, entry 1)

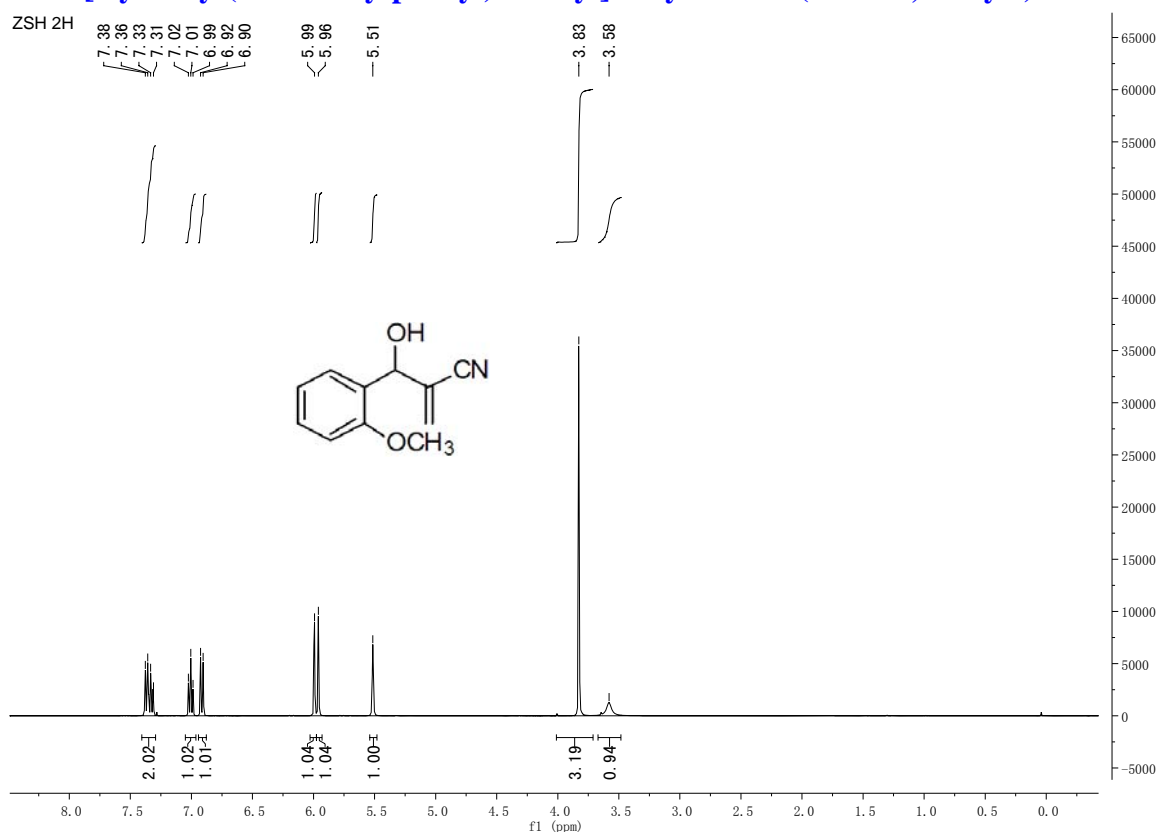


¹H-NMR spectrum (400 MHz, CDCl₃)

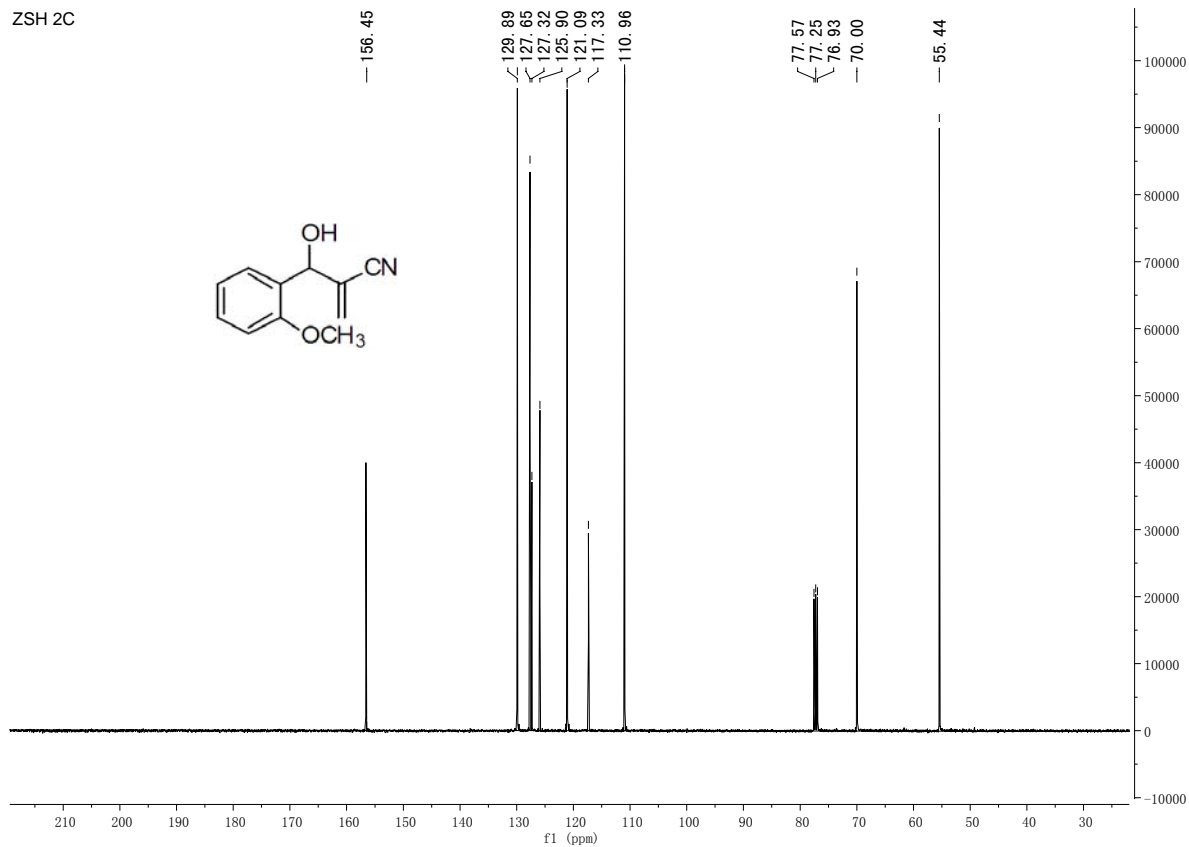


¹³C-NMR spectrum (101 MHz, CDCl₃)

10. 2-[Hydroxy-(2-methoxy-phenyl)-methyl]-acrylonitrile (Table 2, entry 9)

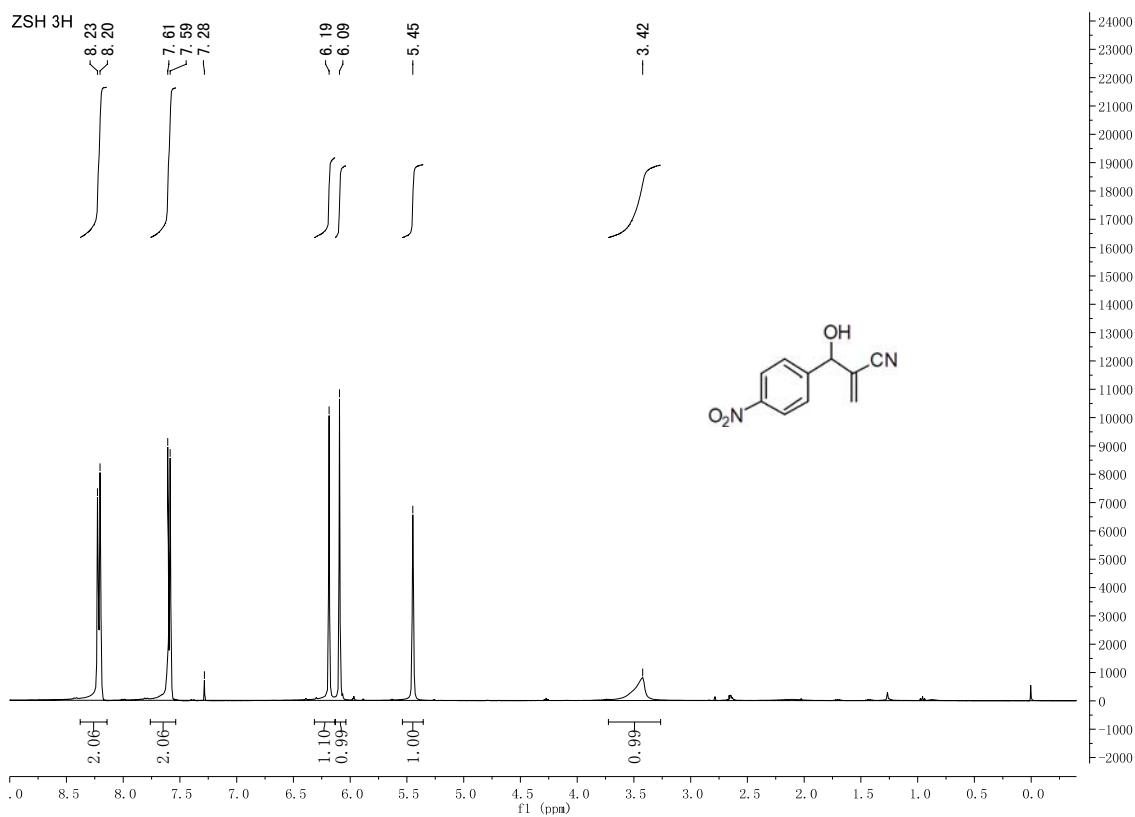


¹H-NMR spectrum (400 MHz, CDCl₃)

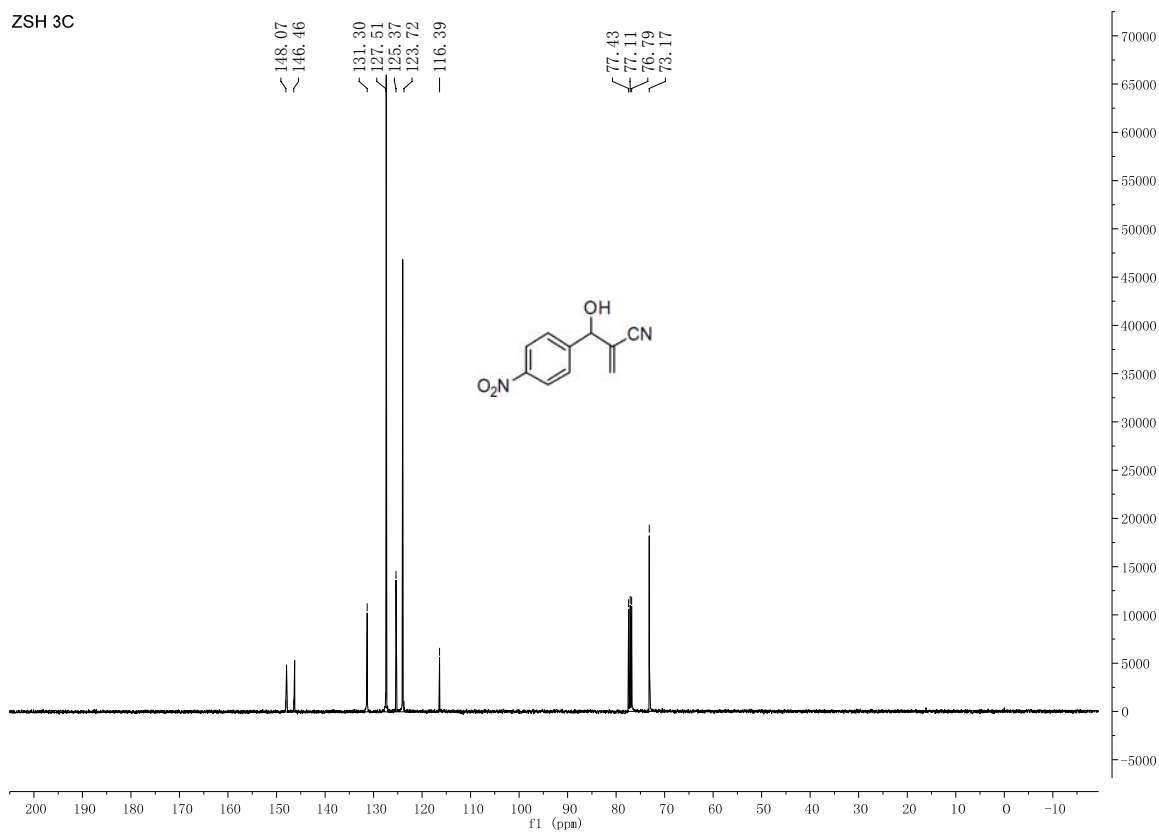


¹³C-NMR spectrum (101 MHz, CDCl₃)

11. 2-[Hydroxy-(4-nitro-phenyl)-methyl]-acrylonitrile (Table 2, entry 4)

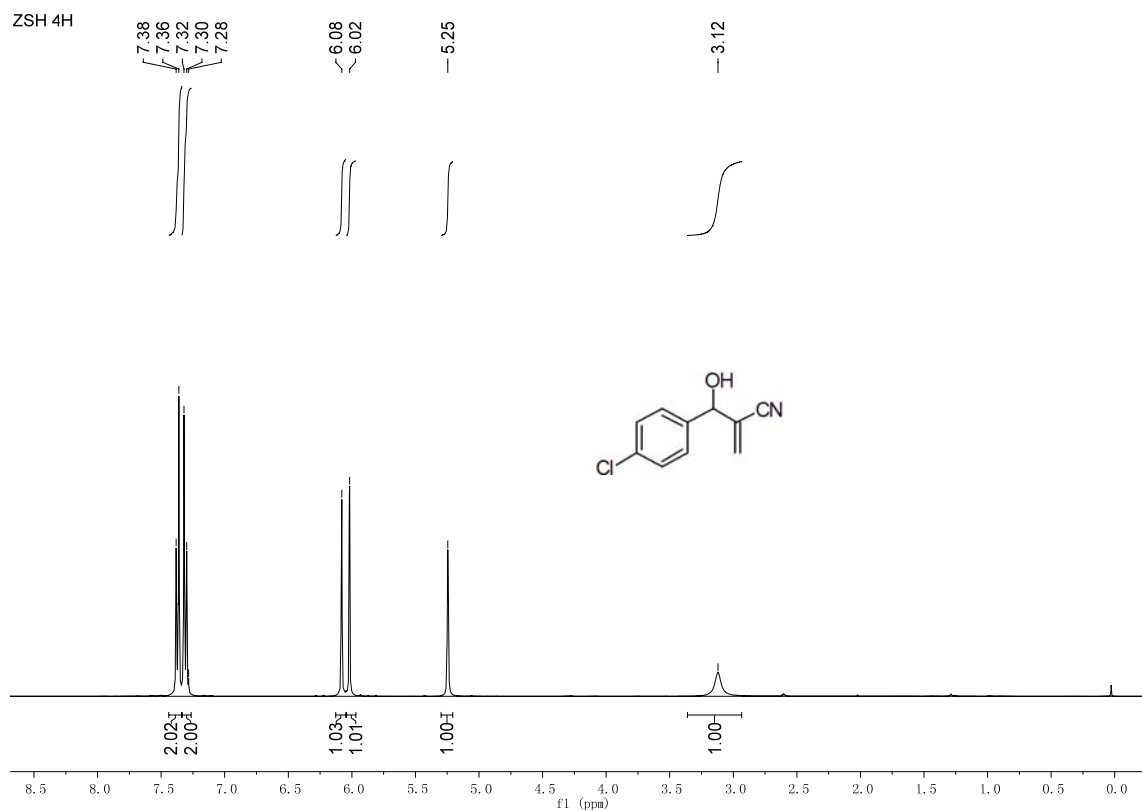


¹H-NMR spectrum (400 MHz, CDCl₃)

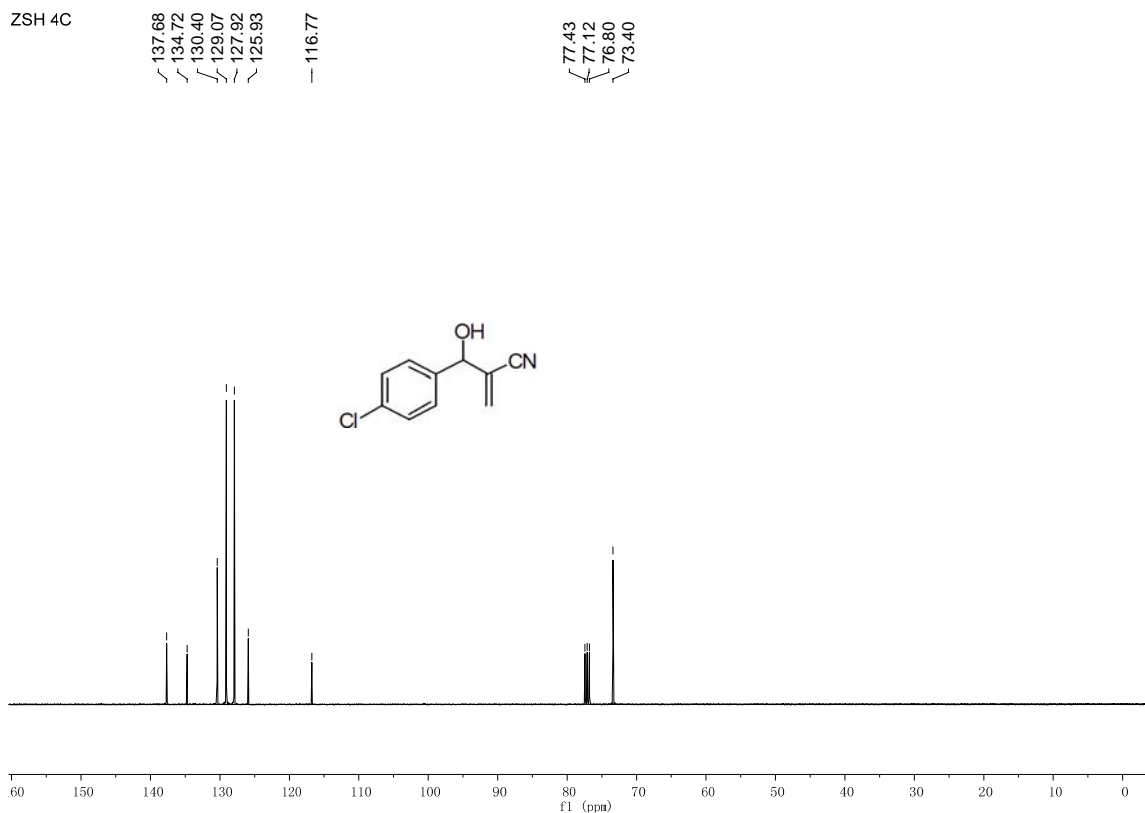


¹³C-NMR spectrum (101 MHz, CDCl₃)

12. 2-[(4-chloro-phenyl)-hydroxy-methyl]-acrylonitrile (Table 2, entry 2)

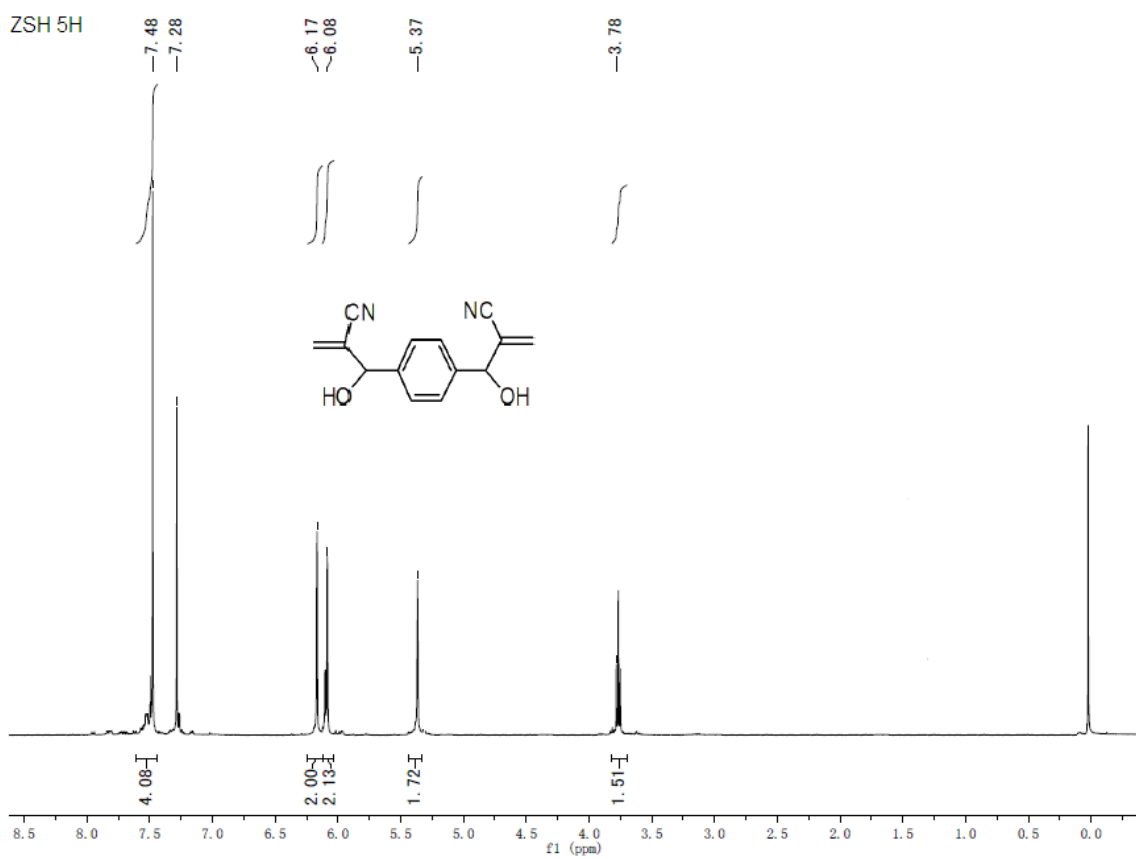


¹H-NMR spectrum (400 MHz, CDCl₃)

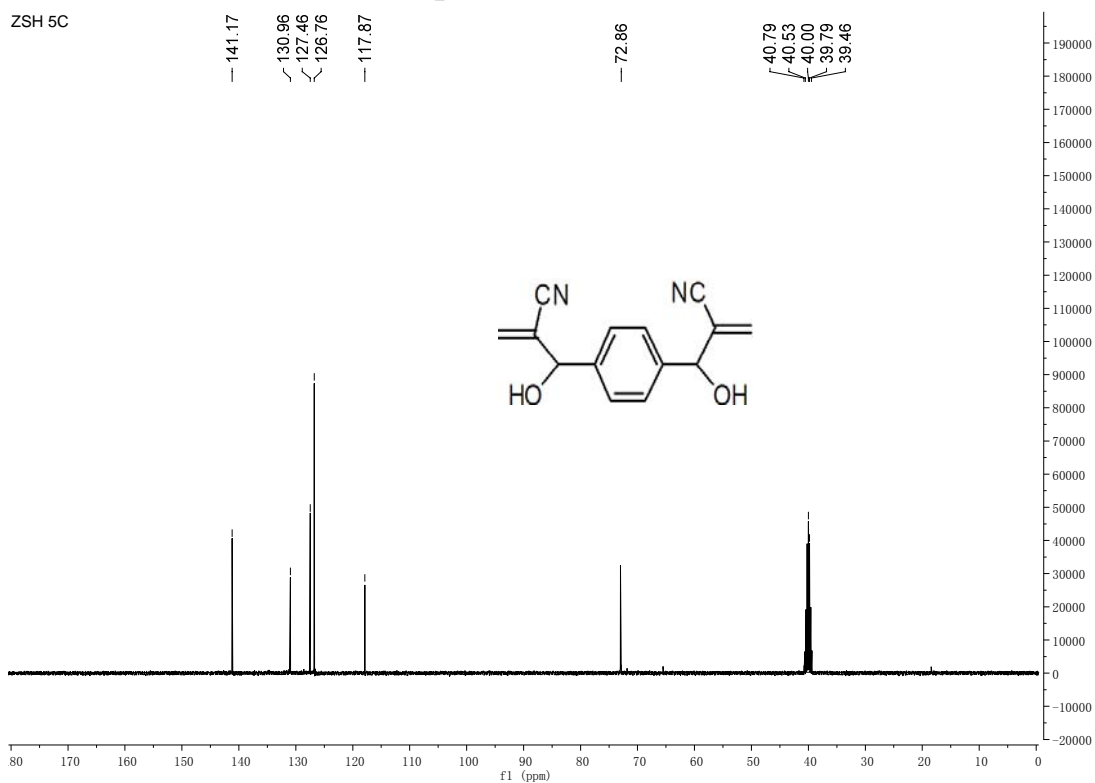


¹³C-NMR spectrum (101 MHz, CDCl₃)

13. 2-[[4-(2-Cyano-1-hydroxy-allyl)-phenyl]-hydroxy-methyl]-acrylonitrile (Table 2, entry 10)

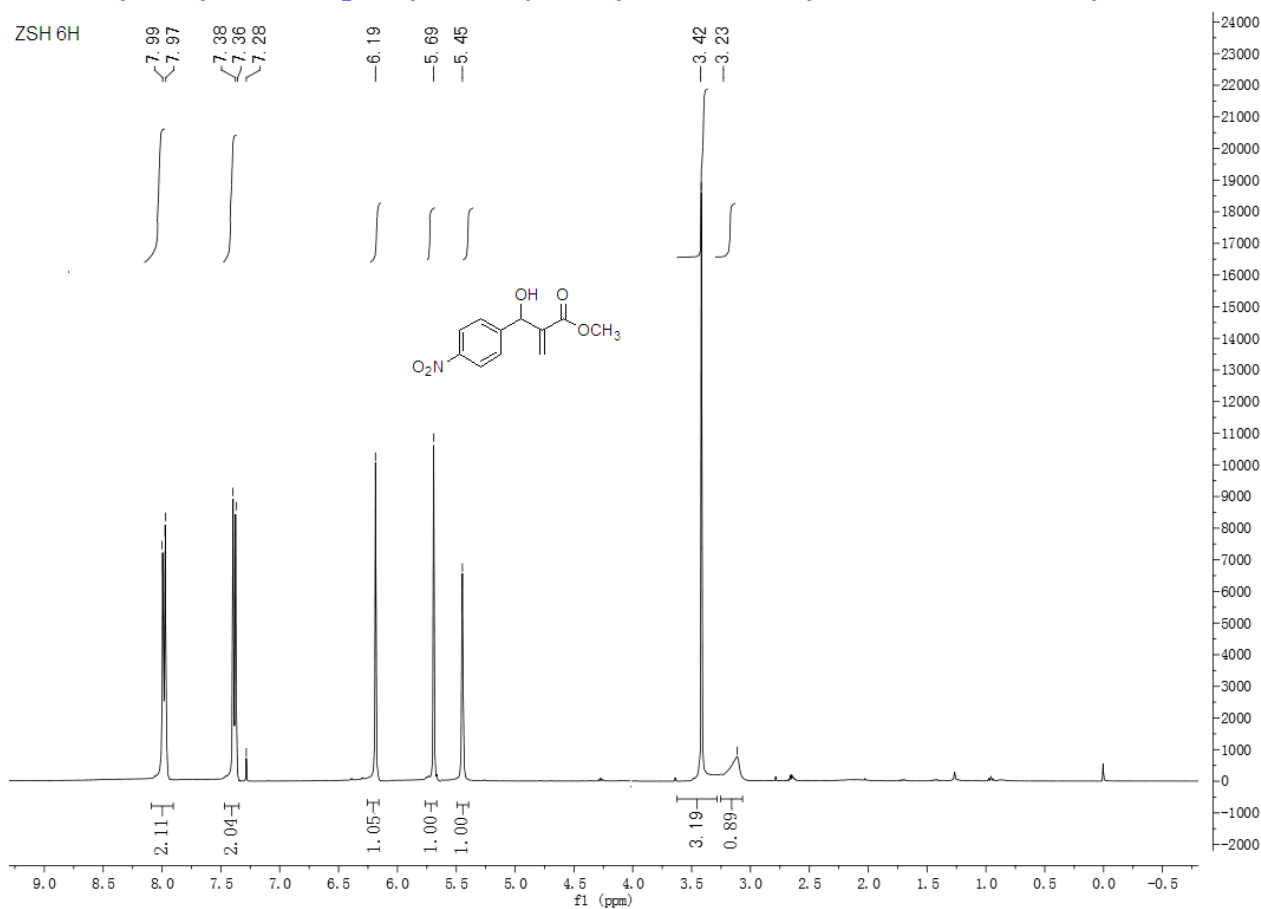


¹H-NMR spectrum (400 MHz, CDCl₃)



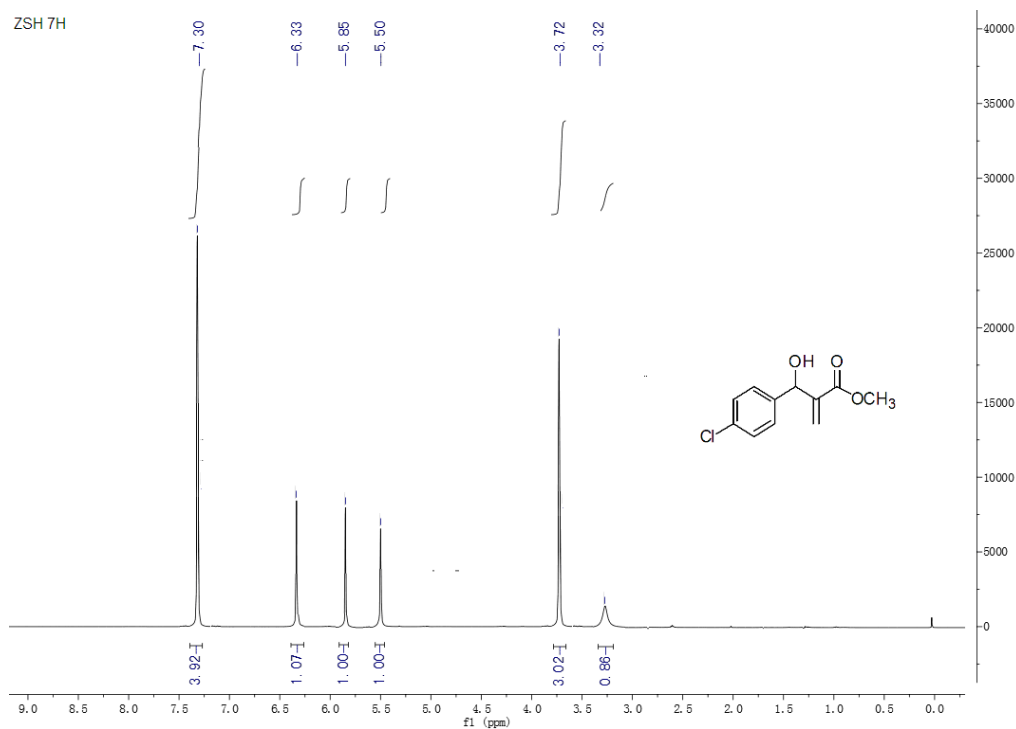
¹³C-NMR spectrum (101 MHz, CDCl₃)

14. 2-[Hydroxy-(4-nitro-phenyl)-methyl]-acrylic acid methyl ester (Table 2, entry 19)



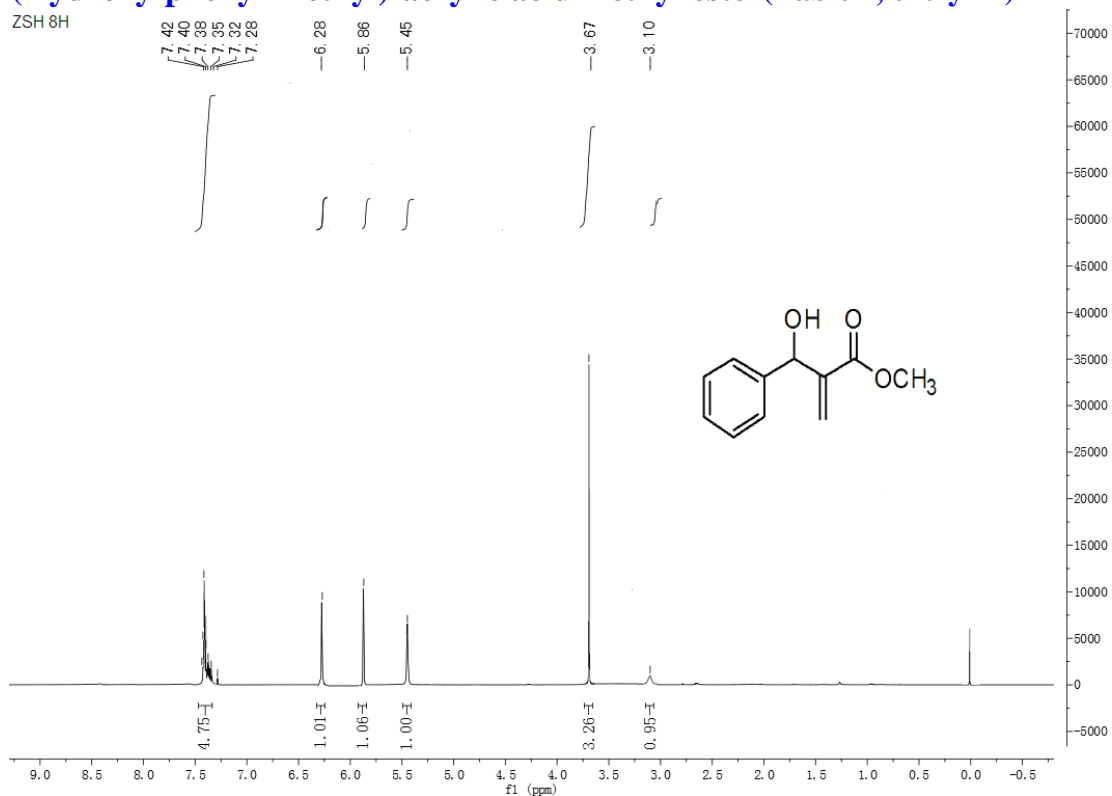
¹H-NMR spectrum (300 MHz, CDCl₃)

15. 2-[(4-Chloro-phenyl)-hydroxy-methyl]-acrylic acid methyl ester (Table 2, entry 18)



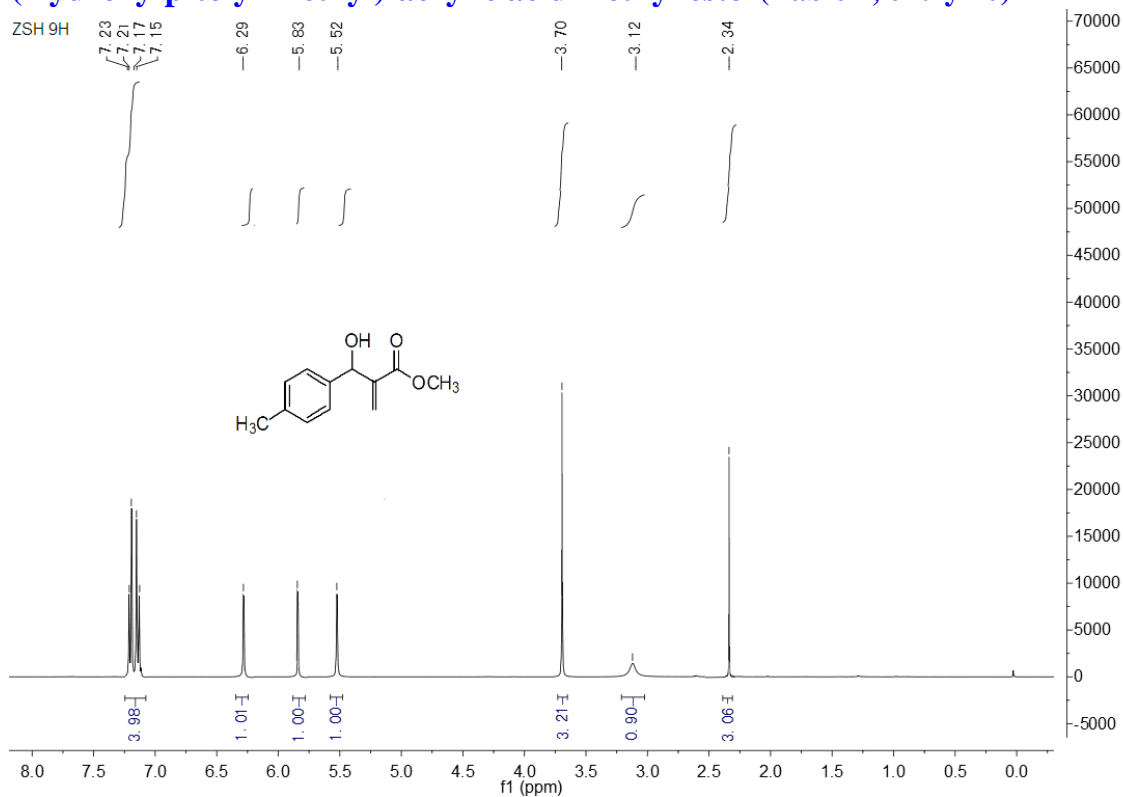
¹H-NMR spectrum (300 MHz, CDCl₃)

16. 2-(Hydroxy-phenyl-methyl)-acrylic acid methyl ester (Table 2, entry 17)



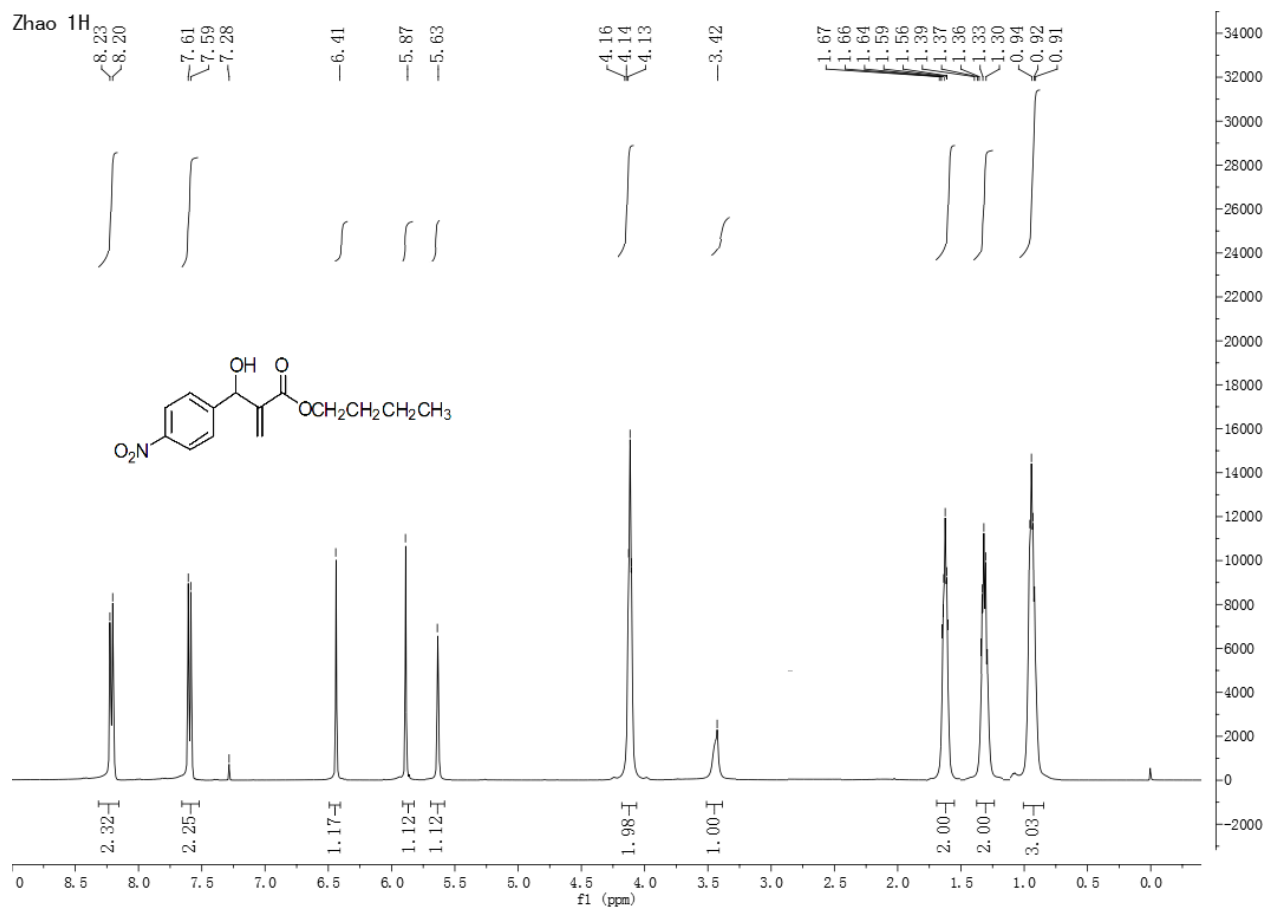
¹H-NMR spectrum (300 MHz, CDCl₃)

17. 2-(Hydroxy-p-tolyl-methyl)-acrylic acid methyl ester (Table 2, entry 20)



¹H-NMR spectrum (300 MHz, CDCl₃)

18. 2-[(4-nitro-phenyl)-hydroxy-methyl]-acrylic acid butyl ester (Table 2, entry 21)



¹H-NMR spectrum (400 MHz, CDCl₃)